

**AMENDMENTS TO THE CLAIMS**

1. (Currently Amended) A sensor array system for detecting the position of an object or energy source, comprising:  
    a cylindrical object having a curved surface;  
    a plurality of sensors arranged around a circumference of the cylindrical object,  
    each having a limited field of view and being that  
        (i) extends along a length of the curved surface, and  
        (ii) is capable of detecting an object or energy source that is positioned  
        within its field of view,  
        wherein the fields of view of at least some of the sensors overlap the fields  
        of view of other sensors, the overlapping fields of view defining unique spatial  
        regions along the curved surface of the cylindrical object; and  
    a data acquisition system, operatively connected to said plurality of sensors for  
    determining which sensors simultaneously detect an object or energy source, thereby  
    determining the unique spatial region, along the curved surface of the cylindrical object,  
    in which the object or energy source is located.
2. (Cancelled)
3. (Cancelled)
4. (Original) The sensor array system of claim 1, wherein said plurality of sensors  
    comprises sensors capable of transmitting and receiving electromagnetic energy.
5. (Original) The sensor array system of claim 1, wherein said plurality of sensors  
    comprises fiber optic light sensors.

6. (Currently Amended) The sensor array system of claim 1, wherein the system is designed to function as a hit detector for detecting ~~the impact of a projectile~~ hit flash plume on said curved surface of said cylindrical object.
7. (Currently Amended) The sensor array system of claim 1, wherein said circumferentially arranged plurality of sensors includes first and second groups of sensors, said first group of sensors having a more narrow field of view than said second group of sensors.
8. (Cancelled)
9. (New) The sensor array system of claim 1, wherein said field of view extends along the length of the curved surface in a direction that is substantially perpendicular to a radius of the cylindrical object.
10. (New) The sensor array system of claim 6, wherein said cylindrical object is a portion of a missile.
11. (New) The sensor array system of claim 6, wherein, for at least one of the plurality of sensors:
  - said field of view extends along the length of the curved surface in a direction that is substantially perpendicular to a radius or curvature  $r$  of the cylindrical object, wherein  $l$  denotes the length of the curved surface;
  - said hit flash plume has a plume height  $p$  within said field of view; and
  - said field of view has a half-angle  $\theta$  in accordance with:

$$\theta = \tan^{-1} \left\{ \frac{\sqrt{(r+p)^2 - r^2}}{l} \right\} .$$